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Indiana State Board of Health.

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The MONTHLY BULLETIN will be sent to all health officers and deputies in the State. Health officers and deputies shall carefully read and file each copy for future reference. This is very important, for we expect to print instructions, rules and general information, which it will be necessary for officers to preserve.

ABSTRACT OF MORTALITY STATISTICS FOR OCTOBER, 1903.

The total number of deaths reported for the month was 2,572, which is an annual rate of 12. In the corresponding month last year 2,554 deaths were reported, a rate of 11.9. In the preceding month there were 2,766 deaths reported, a rate of 13.4. The deaths by important ages were: Under one year of age 424; 1 to 5 years, 198; 5 to 10 years, 74; 10 to 15 years, 61; 65 and over, 659. The number of deaths under one year of age was 17.5 per cent. of the total number of deaths and the deaths of 65 and over was 27.2 per cent. In the corresponding month last year, 17.6 per cent. of the deaths were under 1 year of age and 24.2 per cent., 65 and over. Some important causes of death were as follows: Pulmonary tuberculosis 256, other forms of tuberculosis 41, typhoid fever 160, diphtheria 63, scarlet fever 12, measles 5, whoopingcough 8, pneumonia 132, diarrhoeal diseases 135, cerebro-spinal meningitis 25, influenza 8, puerperal septicaemia 10, cancer 105, violence 140, smallpox 1.

In October, of 1902, there were 205 typhoid deaths, while this October there are 160, a decrease of 45, which is 21.9 per cent. A decrease is also to be recorded in pneumonia, as compared with the corresponding month last year. This October 132 deaths from pneumonia occurred, while in last October 157. This is a decrease of 25, or 15.9 per cent. A decrease in diarrhoeal diseases is to be recorded by the same comparison, also of cerebro-spinal meningitis, puerperal fever and cancer. The deaths by violence are exactly the same this October as in last, while a very gratifying decrease in smallpox is to be recorded, there having been reported only one death from this cause this October, while in last October the number was 12.

SANITARY SECTIONS: THE NORTHERN SANITARY SECTION, having a population of 839,835, and numbering 31 counties, reports 864 deaths, a rate of 12.1. In the

corresponding month last year this section reported 755 deaths, a rate of 10.6.

THE CENTRAL SANITARY SECTION, having a population of 1,024,729, and numbering 33 counties, reports 1,064 deaths, a rate of 12.2. In the corresponding month last year, this section reported 1,077 deaths, a rate of 12.4.

THE SOUTHERN SANITARY SECTION, having a population of 851,836, and numbering 28 counties, reports 644 deaths, a rate of 13.1. In the corresponding month last year, this section reported 722 deaths, a rate of 13.0.

COUNTIES: The counties which had death rates above the average for the whole State, namely, 12.0, were: Blackford 16.4, Carroll 13.6, Cass 19.4, Elkhart 13.8, Grant 15.3, Huntington 13.0, Jay 12.3, Lake 14.6, Miami 13.3, Porter 13.5, St. Joseph 18.0, Wells 14.5, Boone 12.1, Brown 16.9, Clinton 12.1, Delaware 16.8, Franklin 12.2, Hamilton 13.0, Hancock 12.9, Marion 14.9, Montgomery 13.2, Owen 14.0, Putnam 12.6, Tipton 13.5, Vermillion 13.1, Vigo 15.4, Wayne 15.1, Daviess 13.4, Dearborn 13.2, Floyd 14.8, Greene 12.4, Jackson 14.6, Jefferson 14.4, Pike 13.2, Scott 17.0, Vanderburgh 12.9, Washington 14.5. The county having the highest death rate was Cass, which was 19.4. Last month the county having the highest death rate was Greene, 21.3. The county having the lowest death rate this month was Benton, 1.7, while Starke had the lowest death rate last month, which was 7.

CITIES: All the cities of the State, representing a population of 857,840, report 1,120 deaths, a rate of 15.4. In the corresponding month last year, the cities reported 1,098 deaths, a rate of 15.1. The number of deaths under 1 year of age in the cities was 181, which is 17.3 per cent. of the total. This is 2 per cent. less than the average for the whole State. The cities show a higher death rate as compared with the average for the whole State, in the following diseases: Pulmonary tuberculosis, typhoid fever, scarlet fever, pneumonia, diarrhoeal diseases, cerebro-spinal meningitis, influenza, cancer, violence. The cities show a lower death rate as compared with the State in diphtheria, croup and whoopingcough.

COUNTRY: The deaths reported in the country numbered 1,452, a rate of 10.3. Deaths under 1 year of age in the country show a rate of .4 more than in the cities, and the death rate of those who were 65 and over was 8 per cent. greater. Compared with the cities, the country shows a lower death rate during the month in tuberculosis, typhoid fever, diphtheria, scarlet fever, pneumonia, diarrhoeal diseases, cerebro-spinal meningitis, influenza,

cancer, violence. Only for puerperal fever did the death rate of the country exceed that of the cities.

**CITIES BY CLASSES:** CLASS A, cities having over 50,000 population, a total population of 228,171, including Indianapolis and Evansville, reports 290 deaths, a rate of 14.9. In the corresponding month last year this class reported 264 deaths, a rate of 13.6. The rate in Indianapolis for the month was 15.4, and in Evansville 13.7.

CLASS B, having from 25,000 to 50,000 population, a total population of 117,787, reports 178 death, a rate of 17.8. In the corresponding month last year this class reported 173 deaths, a rate 17.3. This class includes Ft. Wayne, rate 12.2; South Bend 23.6; Terre Haute 18.9.

CLASS C, having from 10,000 to 25,000 population, a total population of 218,623, including 14 cities, reports 292 deaths, a rate of 15.7. In the corresponding month last year this class reported 276 deaths, a rate of 14.8.

CLASS D, having from 5,000 to 10,000 population, a total population of 161,751, and including 23 cities, reports 189 deaths, a rate of 13.7. In the corresponding month last year this class reported 238 deaths, a rate of 17.3.

CLASS E, having under 5,000 population, a total population of 131,508, and including 40 cities, reports 171 deaths, a rate of 15.3. In the corresponding month last year this class reported 147 deaths, a rate of 13.1.

The chart showing deaths by sanitary sections will be found on page 117.

## THE MONTHLY STATISTICS FURNISH THE FOLLOWING SUMMARIES FOR OCTOBER.

**DISEASE PREVALENCE:** As in September, typhoid fever was first in area of prevalence. Rheumatism, which was fifth in the preceding month, rises to second in October. The order of prevalence was: Typhoid, rheumatism, intermittent fever, bronchitis, tonsillitis, scarlet fever, diarrhoea, diphtheria, pneumonia, influenza, pleuritis, erysipelas, measles, dysentery, chorera morbus, inflammation of bowels, whooping cough, cholera infantum, cerebro-spinal meningitis.

**SMALLPOX:** Three hundred and twenty-four cases with 1 death in 31 counties occurred in October. In the same month last year 298 cases with 19 deaths in 35 counties were reported. In the preceding month the cases numbered 68 with 2 deaths in 16 counties. The counties invaded were: Allen 1 case, Boone 2, Carroll 1, Clay 75, Clinton 1, Crawford 3 cases, 1 death; Daviess 7 cases, Dubois 21, Floyd 1, Fulton 5, Gibson 2, Grant 7, Hamilton 1, Laporte 2, Madison 2, Marion 2, Marshall 6, Martin 3, Orange 26, Parke 1, Perry 1, Putnam 8, Shelby 4, Tippecanoe 68, Vanderburgh 1, Vermillion 1, Vigo 65, Warren 2, Warrick 2, Whitley 5.

At several points it was plain that the disease first appeared in atypical form in the schools, and afterward appeared among the parents and older brothers and sisters of the school children. At Fontanet, Vigo county, 22 children in a school numbering 47 were found affected

with mild smallpox. In every instance the eruption was insignificant, but two or three days of more or less severe prodromal symptoms existed. Parents would not believe the diagnosis and in instances actual abuse was poured out against health officers for making a true diagnosis. In most of the instances the smallpox which appeared in the parents and older brothers and sisters was severe.

**TUBERCULOSIS:** The tuberculosis deaths in October numbered 292. In the same month last year the number was 241, and in the preceding month it was 307. By ages the deaths were: 5 to 10, 4; 10 to 15, 9; 15 to 20, 31; 20 to 30, 87; 30 to 40, 54; 40 to 50, 30; 50 to 60, 24; 60 to 70, 26. Of the total consumption deaths 192 were females and 102 males. Of the males 64 were fathers between the ages of 15 and 40, and of the females 13 were mothers between the same ages. The number of orphans left by these mothers and fathers was 162. The motherless orphans numbered 26 and the fatherless 136. How many of these orphans will find their way into orphan asylums to be an expense upon the State, and how many of the 64 widows will fall under the care of township trustees can not be told.

**TYPHOID FEVER:** Typhoid fever, the "great filth disease," caused 160 deaths in October. The city rate was 81.1 per 100,000, and the country 75. Seventy-three counties reported 610 cases. Marion county reported 12 deaths and 110 cases.

**PNEUMONIA:** The pneumonia-deaths for the month numbered 133. Of these 65 were females and 68 males. By ages the deaths were: Under 1 year, 25; 1 to 5, 24; 5 to 10, 3; 10 to 15, 3; 15 to 20, 3; 20 to 30, 7; 30 to 40, 8; 40 to 50, 4; 50 to 60, 6; 60 to 70, 17; 70 to 80, 22; 80 to 90, 11.

**VIOLENCE:** The deaths from violence numbered 152. In the same month last year the number was 157. Of the violent deaths, 4 were murders, 21 suicides and 127 accidents. Ten females were among the suicides and the methods they chose were—gun shot 1, morphine 1, arsenic 1, strychnine 2, carbolic acid 4, chloroform 1. Ten males chose—gun shot 3, hanging 3, cutting throat 1, morphine 1, arsenic 1, carbolic acid 2. Some causes of the accidental deaths were, railroads 36, street cars 2, burns and scalds 23, suffocation 4, horses 4, concussion of brain 7, broken neck 3, gun shots 8, mine accidents 4, lightning and electricity 2, drowning 4.

## HEALTH OFFICERS' SCHOOL.

The Annual Health Officers' School for Town Health Officers will be held in Indianapolis, Wednesday and Thursday, December 16 and 17. All town health officers will be regularly summoned to attend, which will be according to the law, and which will make legal the claims for expenses of the officers against their respective boards. See acts 1903, page 163, section 6.

The school will be held under the auspices of the State Board of Health, and attendance is compulsory. Applications to be excused from attending must be presented in writing to President W. N. Wishard.

The corps of teachers will include Surgeon-General Geo. M. Sternberg, U. S. Army (retired); Surgeon General Walter Wyman, U. S. Public Health and Marine Hospital Service; Prof. F. G. Novy, M. D., Junior Professor of Hygiene, University of Michigan; Dr. David Dennis of Earlham College; Dr. Chas. O. Probst, Columbus, Ohio; Professors Coulter and Burrage, of Purdue University. Morning, afternoon and evening sessions will be held the first day, and morning, and afternoon sessions the second day. Officers attending shall register the forenoon of December 16th, and will receive certificates of attendance the second day, which will entitle them to expenses. The new Book of Instructions will be distributed at this meeting.

### VACCINATION WAS NOT THE CAUSE OF THE LOCKJAW DEATHS AT LAFAYETTE.

The newspapers having recently announced two deaths at Lafayette caused by "lockjaw due to vaccination," the cases were carefully looked into, with the following results:

First case: Leonard Clark, three years old, was vaccinated by Dr. W. S. Walker, October 11. The vaccination took typically and the wound healed promptly. On October 31 symptoms of tetanus appeared and the child died. The child played in the alley, back yard and in the streets many times after the day he was vaccinated. The same virus was used on many other children, and neither the attending physician nor the parents believe the vaccine contained tetanic germs, but they do believe the child found the infection during play, and possibly it was introduced through the scarification.

Second case: Georgia King, aged twelve years, was vaccinated by Dr. F. B. Thompson, October 13. Every care was taken. On November 2 tetanus developed and she died November 3. The vaccination was typical, and many other vaccinations were made with the same lymph. It is not known that the child visited the stable or played in the back yard or street. She did, however, scratch the wound. Neither the attending physician nor the parents believe that the vaccine lymph supplied the germs which caused the death.

A case of tetanus occurred in a child thirteen days old in Indianapolis, October 23. The child was never vaccinated, but nevertheless the infection found entrance somehow.

### A MODEL REPORT.

Messrs. Holt Pickens, James W. Davis, Richard N. Gray, Commissioners and ex-officio Members of the Owen County Board of Health:

During the past year our county has been practically free from contagious and epidemics, except smallpox in Spencer and vicinity, and in Clay and Montgomery Townships. Smallpox was brought to Spencer from Indianapo-

lis, and was of severe type. The cases that developed in Clay and Montgomery came from Greene County and was milder in form. There were 20 cases in Spencer and vicinity, with 3 deaths. The Spencer epidemic was not dealt with with that vigor and promptness the situation demanded. Valuable time was lost at the first by the town health officers in not removing at once the first case to a pest house or tent and vaccinating and revaccinating all exposed, and also vaccinating all school children and the whole town population. By promptly isolating the first case and furnishing free vaccination to all, and dealing with the cases as they developed instead of trying to shift responsibility on the Township Trustee and County Board of Health, lives could have been saved, much suffering avoided, and business would have gone along in the usual way. I am not informed as to the amount of money it cost the town and Washington Township, but I am led to believe it was not much less than one thousand dollars. By dealing vigorously and promptly with the first cases, I am of the opinion that one hundred dollars would have been ample to control the disease. This epidemic, unfortunately, occurred about the time there was a change of Secretaries of the Town Board of Health and led to demoralization and bickerings as to whose duty it was to look after these cases. From my experience as your secretary, I am led to know that it is not wise or for the best interests of the people to be changing secretaries at every election, no matter if others are clamoring for the office. It can generally be said that the man who makes a vigorous fight for the place is, as a general rule, wholly unfitted for the position.

The cases in Clay Township were confined to the families of John and Calvin Carpenter, and in Montgomery Township to the family of Hamilton Dean. These families were promptly quarantined, and all exposed vaccinated, so that the disease did not get beyond these families, and some of them, by reason of prompt and successful vaccination, did not contract the disease. While I do not know just exactly the expense that these cases were to the county, I am satisfied it was not much over one hundred dollars. All these cases had the best of care. In one of them, the family of Calvin Carpenter, a nurse was employed and paid by Mr. Franklin, the Township Trustee.

I have nothing new to state in regard to the County Infirmary and Jail. The County Board of Charities have these places under supervision and make reports to you of their condition and needs. I desire to state that all recommendations for the betterment of the Infirmary and Jail meet my hearty approval.

During the year, Walter Dyar, Trustee of Jefferson Township, and W. W. Lucas, Trustee of Lafayette Township, have erected one sanitary schoolhouse each, in their respective townships. The one in Jefferson Township is of brick, on one acre of ground, well drained, and among the forest trees; foundation of stone, with a layer of slate between the stone foundation and brick walls. The building is 24 x 30 feet. There is a door leading from the outside into the vestibule 6 x 8 feet, with cloak rooms on either side, doors leading from vestibule into cloak rooms, the

cloak rooms being 8 x 9 feet with doors leading from cloak rooms into the school room. The school room is 24 x 24 feet, faces south, with five windows on the north and three on west, all of ribbed glass. Pupils face east with single seats to fit the pupils, with the light falling over the left shoulder and back. In the main room is a large jacketed stove that gets fresh air from the outside, warms it and is distributed in the school room. At the north end of vestibule there is a large chimney built from the ground up, with double flues, one for smoke, the other for foul air. There are two floor registers 12 x 14 inches in floor, one in northwest corner, the other in northeast corner of the school room. These registers are for the purpose of warming the floor and using the fresh air under the floor on very cold mornings when it is necessary to rapidly warm the room. On either side of the stove there are openings for the purpose of warming the feet of the children if they are damp and cold.

Mr. Lucas built a house exactly like the one described, except it is frame. The house in Jefferson Township was used last winter and gave the best of satisfaction. There was less colds, less illness, less suffering among the children than ever before—in fact there was no suffering at all, for pupils were comfortable all over the room, there being a complete change of air every fifteen minutes. Mr. Lucas has not as yet put in a heater, but he informs me he will as soon as arrangements can be made for the money to purchase it. These two schoolhouses are models, in the way of trustees trying their best to conform with the plans furnished them instead of trying to thwart them. If the present Owen County Board of Health, when it goes out of office, had nothing to point to except the urging of better schoolhouses when one is to be built, it could well afford to be content. No doubt you are all aware of the number of school houses in Owen County that are wholly unfit for school purposes. They are bad in every way. Not all of them, but a great many are so open that children have suffered from cold, and in some instances their feet have been frozen. No doubt the houses we are building now are not perfect. Perfection is not attained in this life, but without a single exception, all the recently built schoolhouses are a great improvement on the old, and with a little changing in some of the new houses built within the last three or four years, they can be made comparatively comfortable and sanitary. I have visited, within the year, a great number of schoolhouses, and a number are unfit for use for school purposes, and some are a disgrace to our intelligence and humanity. Some of these houses are the cause of nervousness, indigestion, constipation, bad eyes, catarrhs, and in many cases lay the foundation for consumption. We must not relax our efforts in demanding better schoolhouses for the children of Owen County. Each schoolhouse erected must be constructed on lines of its own, that is, by itself. We must have patience and grace in our efforts to benefit the people, by building sanitary schoolhouses, and controlling, so far as we can, infectious and contagious diseases. Sanitary science is new to a large number of our people, but the light is beginning to shine in, and each year the people are beginning to realize that Boards of Health that

fearlessly do their duty are beneficent autocrats, especially when confronted with epidemics and contagions. Hundreds of pamphlets on typhoid fever, diphtheria, smallpox, consumption and cholera infantum have been distributed. Mothers especially are asking for health literature, both in person and by letter. Hundreds of letters have been written the past year in regard to sanitary matters. The people as a general rule are hungry for more knowledge along health lines.

When we look back over the past five or six years and realize what has been done for the people toward building better schoolhouses, preserving life, preventing suffering, and saving money, we should take courage and renewed vigor for the work that lies before us.

Personally, I want to thank the Board for words of encouragement and aid always given me, for had it not been for this help, little would have been accomplished.

N. D. Cox,  
Secretary.

Spencer, Ind., November 1, 1903.

### MAKE WAR AGAINST DUST.

Those who have not analyzed the air we breathe, especially the air of cities, can form no adequate idea of the filth it carries. If, with an appropriate apparatus, we draw ten gallons of air in a city street through distilled water we will catch much suspended matter, such as pulverized manure, dried spittle, fine earthy particles, pollen and other fine vegetable debris, fine pieces of insects, linen and cotton fibers, epithelium scales, pus cells, soot, and other forms of comminuted matter. We will also catch lots of microbes, most of them harmless, but possibly some of them disease-causing forms. Some of these particles are disgusting, but we breathe them when even slight dirt clouds arise. The diseases which are borne to us in the air are pneumonia, tuberculosis, catarrh, coughs, colds, grip, — in a word, all diseases of the air passages. Every one knows what havoc these diseases cause each year. For instance, in 1902 in Indiana, consumption caused the death of 4,232 persons, pneumonia 2,919, grip 456, making in all 7,607 persons who found their death in breathing dust-laden air. Many people, when these facts are told them, get flighty, and commence calling the relator crank and other hard names. They further say: "Don't tell us all this, it makes us sick, and our lives will be miserable. If you microbe cranks don't stop you will make life unbearable," etc., etc. These flighty utterances don't stop the destruction, however, and so these unimprovable conceited people must be passed over. Their stupidity does not stop human progress, it simply stops the individual.

Well, now these facts confront us, don't let us denounce and ignore the Paul Revere who brings the alarm, but let us calmly try to better conditions. Let us pave our streets, sweep and sprinkle them, stop the ejecting of oral excrement (spitting) upon them, and do everything we can to lessen the dust. Doing this will mark us as rational, because we will be making practical use of our knowledge.

## PREVENTION OF CONSUMPTION AND HOW TO CURE INCIPIENT CASES.

It has long been known that consumption is preventable and is curable in its incipient stages. The disease is caused by a specific germ, a microbe, and to it has been given the name, bacillus tuberculosis. Before this germ can find lodgment and grow in any person, that person must have his vitality lowered. In other words, during good health the invasion can not occur. When nutrition begins to fail in an individual, which is very frequently caused by a continued breathing of bad air, then consumption is invited. Bad air is the bane of the human family and especially of those people who dwell in houses. House-dwellers are particularly liable to consumption. This is principally because they do not have enough fresh air. Children confined day by day in a poorly ventilated schoolhouse and supplied with foul air are almost certain to be made more or less sick. There is not enough oxygen given to them to keep the blood pure and in consequence nervous disorders and indigestion follow. The child fails in health, grows nervous, irritable, talks of its lessons in its sleep and is sick. The vitality having thus been lowered, it is easy for the consumptive germs, which are widely distributed, to find entrance and permanent lodgment, and produce the peculiar disease which is an accompaniment of their life processes. We seem to be at great pains to surround ourselves with the conditions which produce consumption, for we have unventilated court rooms, unventilated churches, unventilated offices, stores, schoolrooms and houses. We certainly reap a full crop from this sowing, for one in every seven deaths is caused by consumption. It has already been said that the constant breathing of bad air is one of the greatest causes of malnutrition and it is not until malnutrition commences in an individual, and not until his respiratory passages are impaired in their functions, that he possibly can have consumption. The prevention of consumption is therefore to breathe pure air. Sanitary science gives full and clear information how to ventilate all buildings, and hygiene announces that unless we do ventilate, we must suffer. We foolishly refuse to obey nature's laws of health and the results are well known. Upon the simple fact that people must have an abundance of pure air if they wish to escape consumption, is based what might be termed the "modern consumption cure." The routine method at the public Sanatoria for Consumptives is to cause the patients to lead the hygienic life. The buildings are so constructed as to be filled with an abundance of pure air at all times, and the patients, in addition, are made to live in the open air, only coming into the house for their meals and bath and changes of clothing. At night they sleep essentially in the open air, for the bedrooms are so arranged as to be completely open on one side at least. The patients sleep in a temperature the same as prevails outside the house both winter and summer. They are also taught exercises which are calculated to expand the lungs and better enable them to fill them with air. Cold baths are used both for the purpose of cleanliness and to secure perfect skin action. The diet is carefully attended to.

Only bland, nutritious foods are furnished, such as eggs, milk, cream, beef, mutton, fowl and vegetables of all kinds. Pickles and salads and pastries are never used. The desserts are always fruit with light sponge cake, or bland, nutritious puddings, as rice and bread puddings, etc. Medicines are hardly used at all. Indeed, it may be said they are not used except in those cases which are considered incurable and then only for the purpose of relieving symptoms, that the patient may die in comfort. Stimulants, as coffee, tea and alcohol, are usually avoided or taken very weak, and milk and water are the preferred beverages. A regular life is followed. The program for each day is carefully laid out. The patient is given all the sleep he possibly can take and sleep is induced by outdoor living and by sitting or walking in the sunshine. At certain stages of the disease and under certain conditions, perfect quiet is imposed upon the patient and under other conditions the patient is taught to take more exercise, mild gymnastic exercises in addition to walking.

At the Texas State Sanatorium for criminal consumptives the patients who are able work in the gardens and in the fields and raise vegetables and supplies for their own and other state institutions. By having a sanatorium, Texas therefore saves many lives, saves money and practices progressive humanity. In Indiana the consumptive criminals in our prisons are kept along day by day in their cells until finally they can not hold up any longer. They are then transferred to the hospital, where they die. If perchance their term expires before death releases, they are set adrift with their disease, in the community, very frequently to become a charge upon the township or county wherein they may establish themselves.

It is well known that the infection of consumption resides in the sputum, and one of the foremost preventive measures is to require by law, and also through public opinion, that the consumptive shall care for his sputum in a sanitary way. This will lessen the infection in the world very materially. Food infected with tuberculous organisms must also be avoided. This means that milk shall not be used which is furnished by cows affected with the disease, and beef must not be used which is infected. The suppression of consumption can not be accomplished by individual effort. It is a work of the State and the longer the State puts it off, the worse for the people. Much of the State work is purely educational and this education should begin in the schools. In this way every person, in the end, has a full knowledge of the situation. If the pupils are furnished with pure air in their schoolrooms, if the schoolrooms are evenly warmed, and they are taught why it is necessary, and if schoolrooms are properly lighted and the pupils taught why this is necessary, better conditions would very soon prevail. The principles there acquired would be carried to the home and practically applied to everyday life. So far as legislation is concerned, we should have laws rigidly enforced, declaring spitting in public places a nuisance, and requiring that the catarrhal or consumptive person and those with diseases of the throat and air passages, shall take special care of the secretion which they throw off. The statutes should also require that all public buildings should be thoroughly

ventilated and specify that such conditions shall prevail in every public building, as to admit of a complete change of the air in every room at least four times every hour. To make such a law self-enforcing, it would only be necessary to ordain that contractors shall not have valid claims where the conditions of the law are not complied with. It is obvious that under such a law contractors would not build a house which did not meet the legal conditions. The law would thus enforce itself. Railway coaches and sleeping-cars abound in conditions which are conducive to diseases of the air passages. An eminent specialist of New York has stated that 80% of his pneumonia cases in adult males have a previous history of railway travel, and especially of sleeping-car experience. There surely is ingenuity enough in America to more perfectly ventilate railway coaches, trolley cars and steamboats.

The State is vitally interested in the matter of the preservation of the public health, and its strong hand should force upon the people those conditions which prevent disease, and not allow conditions to prevail which are conducive to disease. Hygiene plainly teaches what nature's law requires in order that health may exist, and sanitary science teaches how those conditions may be secured. In order, therefore, that the people may be happier and that they may progress, let them obey the laws of nature which these two sciences have discovered.

### SANITARY BENEFITS OF HEAVY RAINS.

We have on other occasions in the Bulletin called attention to the fact that heavy rains are beneficial in clearing the atmosphere of impurities, as well as of carrying into our streams on the bosom of our swollen rivers refuse and offal of various kinds that would otherwise pollute the air and soil.

The following from the Chicago Record furnishes some interesting and astonishing data relative to the purifying properties of rain especially in great cities:

"The health department has often called the attention of the public to the fact that rain is a great purifier, and there is some highly interesting testimony to the same effect in a recent number of the London Lancet which is fortified by references to recent examinations and analysis.

"Beginning with June 13th London had a continuous rainfall for five days, the total precipitation being estimated at 3.8 inches. On the third day of the period a supply of raindrops was secured for an investigation, and it was found that the solid matter contained therein amounted to 9.1 grains per gallon. Among the constituents noted were common salt, ammonium sulphate, organic ammonia, soot and suspended matters and nitrates. The Lancet assures us that the quantity of ammonia sulphate, .625 grains, was remarkable, and that its chief origin is the consumption of coal. Salt contributed .8 grains and soot and suspended matter 5 grains. With this analysis and an estimate of 6,437,229,860 gallons for the total rainfall over the London country area as the basis of the calculation, it is figured that the enormous downpour

'represents the washing out of no less than 3,738 tons of solid impurities, of which 330 tons consisted of common salt, 267 tons of soot and suspended matters.' Another interesting computation is given as follows: 'Regarding the combustion of one ton of coal to produce twenty pounds of ammonium sulphate (a very fair average), the quantity of coal represented by the storm would be 29,904 tons.'

"The Lancet adds that besides the purification which is shown by the analysis there is a bacteriological purification also, which of course is a very important factor in the beneficent work of the rain."—Exchange.

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**VERY SAD:** It makes us very sad to have to say that two county health officers reported no smallpox in their counties in August, yet the death reports showed a death from this cause in each officer's jurisdiction. In one county, the report said "no cases," but the State officer knew of five cases, and they were properly credited.

Two years ago the State officer rode thirty miles through a certain southern county and found fifteen cases of smallpox. He arrived at the county seat and calling at the office of the county health officer, learned that the gentleman had just gone to the telegraph office to answer a telegram from the Governor asking how many cases of smallpox he had in his county. When he returned it was discovered that the information given to the chief executive was that "no smallpox existed in — county." The State officer had the telegram corrected, and on the following day found eighteen more cases, in the northern part of the same county. These office reports of certain health officers make us very sad, and at the same time teach us that some officers are active and some are not. It takes about three months to secure information at the central office as to activity and inactivity.

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**A LAYMAN'S VIEW:** Very frequently we receive letters from the laity in regard to the conduct of physicians in regard to public health affairs which are interesting and which show that people are not so slow as some members of the medical profession may believe. We have before us at the present time a letter from a superintendent of the public schools in one of Indiana's towns. He says:

"There is an epidemic of measles here and our school is quite broken up. The doctors and the health officer are a unit in saying that this disease is not dangerous, and that every person must have it, and it is best that it be undergone in childhood. I notice by your reports that more children die annually of measles than from scarlet fever. It seems to me this is a poor standard by which to determine the virulence of a disease. It seems to me that under proper conditions, it is not at all necessary for 'all persons to have measles,' any more than it is necessary for all persons to have scarlet fever, which was also at one time believed. I know that in early days, people exposed their children to scarlet fever when it appeared in mild



form, in order that the disease might be 'taken' and the matter over with. Frequently the fever was acquired in virulent form and caused deaths. This old notion has been abandoned, but the same idea still clings to measles. One physician said when I talked to him upon this subject: 'We must not be too strict, else the doctors will not have enough to do.' While the above was said as a joke, there is more truth than jest in it. However, I do not consider the utterance a credit to the doctor. At present in one room, where the school enrollment is 52, only 18 pupils are present. The same loose conditions prevailed last winter, for a time during the smallpox outbreak. If smallpox should start under present conditions, it would be as bad in a short time as measles now is."

\* \* \*

**MR. GUTSCHER FINED:** At Columbia City is a sanitarium which is styled the Gutscher Sanitarium. This place was quarantined by the health officer of Whitley County, Dr. W. F. King, on September 22, on account of smallpox. Mr. Gutscher, proprietor, violated the quarantine by leaving the premises and drove to Lari-ville, and attempted to mail a package of letters. He went into several places of business and made the statement to several people that he could not be quarantined. The next morning the Sheriff accompanied the health officer to the sanitarium, and after discussion of the situation it was supposed there would be no further violation. The prosecuting attorney, however, promptly commenced prosecution, and when the quarantine was raised and the trial held the offender was fined \$25 and costs, amounting in all to \$63.18. It is hoped this enforcement of the penalty for violation of a quarantine will have a salubrious effect.

\* \* \*

**CONCERNING CERTIFICATES OF VIOLENT DEATHS:** In the last number of the Bulletin was printed a short article upon this subject, in which attention was called to the fact that physicians, in making out death certificates, where death was caused by violence, very rarely gave satisfactory "cause of death." For instance, it is not uncommon to have the cause of death written in as "gunshot wound," but it is not stated whether it is a murder, accidental or suicidal. In other instances the certificate will report death from "crushing," but no particulars accompany, and, therefore, little information is secured other than that a death has occurred.

We have a kind letter upon this subject from Dr. D. M. Buley, Coroner of Knox County. He says in part:

"You say that physicians and coroners should be more specific and state whether or not a death was an accident, murder or suicide. Permit me to kindly call your attention to the fact that a death certificate is required to be given before any evidence can be taken. For instance, if a man is killed in a mine the coroner of the county in which the accident happens goes to the mine, views the remains and gives a death certificate, for the body must be buried without delay. The coroner must do the best

he can, but the inquest has not yet been held and some time must elapse before findings can be announced. In the Engle case, which happened October 30, I am not yet through with at this day, November 11. I believe the death was accidental, but the evidence does not all point to this conclusion."

We thank Dr. Buley for his letter, for it gives us light which we needed to have. Evidently no person could tell what he does not know, and, therefore, when the evidence and the conditions point to unsatisfactory conclusions, we are confined to doing the very best we can. It has been argued that when we do not know satisfactorily what the cause of death is, it would be best to answer "cause unknown" rather than to guess wildly in the premises. This argument undoubtedly has much force.

\* \* \*

**AN INTERESTING QUESTION:** A certain health officer and two other physicians were called in to help at an autopsy. The result of the finding was to attribute the cause to tabes mesenterica. The attending physician greatly surprised the others by returning in the Death Certificate, "pernicious malaria," as the cause of death. The health officer in the light of these facts, asks: "When it comes to issuing a burial permit and accepting the certificate in this instance, should a correction be made or should the certificate be accepted at this office?"

After a careful review of the law, the following answer was returned:

"For many reasons (it would require some space to enumerate) the Death Certificate as written, must be accepted, and a burial permit issued thereon. As the matter is principally for statistical purposes, it would be well for the health officer who is cognizant of the fact that the cause of death is not the correct one, to issue a second one, marking it 'duplicate' and appending it to the original one. To this Certificate an explanation, if thought necessary, might be attached. In instances like this, if the disease is believed to be a contagious one, then it will be the duty of the health officer to accept the Certificate and the return, but to enforce the law so far as it pertains to the burial of the body which is dead of the infectious disease."

\* \* \*

**CONCERNING A PETITION:** A petition was received by the State Board of Health from a city in Indiana, which was signed by 14 resident physicians. This petition set forth the fact that an icehouse was being erected near a pond which contained pollution, and it was set forth that ice cut from such a pond would certainly produce ill health if the same were used for domestic purposes. The petition requested the State Board of Health to interfere and if possible prevent the building of the icehouse and the putting up of the ice from the polluted pond. A careful review of the law by the members of the Board resulted in the following answer:

"Any citizen has a right to construct an icehouse without reference to the character of the ice. It is only when

the owner of said ice proceeds to sell or distribute it, that the health authorities become interested, or have any authority whatever. Further, even though examination should demonstrate that the ice was unfit for use in drinking water, the health officers could not prevent its being sold for simply cooling purposes, to butchers, saloons, packinghouses, etc. If the ice were condemned for domestic use, then the health officer could issue and enforce an order that it should not be used."

As for stopping the building of the icehouse, that is impossible, for not a sentence of law exists which authorizes such a step.

\* \* \*

**MUNGER BREAKS QUARANTINE:** Mr. Munger was under quarantine on account of diphtheria at Anderson. He disregarded the quarantine on Nov. 5th and left for Martinsville. Dr. Conrad, health officer of Madison county, promptly notified the health officer of Martinsville and promises to prosecute Mr. Munger upon his return.

\* \* \*

**AT GENEVA:** A petition from citizens of Geneva was received, asking the State Board of Health to make an inspection of the town and to offer recommendations. The petition set forth in part as follows:

"The town of Geneva is certainly in a bad sanitary condition. Manure piles, garbage heaps and running-over vaults are to be seen on every hand. Bad odors can be smelled everywhere. In the rear of many business houses are to be found heaps of rubbish and piles of decaying vegetable matter. The conditions certainly exist here which will eventually produce an epidemic of some kind. We pray for your inspection and advice to be given at an early date."

In accordance with this petition, a deputy health officer was sent to Geneva. The inspection confirmed everything laid down by the petitioners and more, too. Many citizens were found who fully realized the bad unsanitary conditions and such gave their fullest support and help to the deputy health officer. Many recommendations were made and among others the health ordinance prepared by the State Board of Health was presented to the Town Board of Trustees. This ordinance was almost immediately passed and is now the law in Geneva. In accordance with the ordinance notices were sent out requiring the people to clean up their premises and disinfect where necessary, and such notices contained the information that if the premises were not cleaned within ten days, the work would be done at the expense of the property owner, the same to be collected as other taxes. No doubt Geneva will look and smell differently in a very short time. We note that the editor of the Geneva Herald is interested and is lending all the aid he can to securing better sanitary conditions in the town.

\* \* \*

**AN ADDITION TO SANITARY LAWS:** The Legislature of 1903 passed the following act:  
Section 1. Be it enacted by the General Assembly of

the State of Indiana, That whoever puts, throws, dumps, or leaves any tin cans, old iron, brush, boxes, machinery, rubbish, debris of any kind or character whatsoever in, upon or within the limits of any public highway, road, street or alley is guilty of an unlawful act, and upon conviction thereof shall be fined in any sum not to exceed \$50.

\* \* \*

**VACCINATION PROTECTS AGAINST SMALL-POX:** In Dubois County smallpox has prevailed for at least three years. Dr. Kempf has kept up a strong fight against it and has met with the usual opposition. One step lately taken was the publication of the following hand bill:

**THE FACTS!**

The following is a record of the smallpox history in the town of Jasper during the last few months:

NAME.	Age.	No. in family.	No. affected.	RECORD.
John Weber .....	40 Years.	8	1	John Weber never was vaccinated. The others escaped by being vaccinated.
Ernest Goepfner .....	2 Years.	3	1	Ernest never was vaccinated. The others were vaccinated and escaped.
Polly Royer .....	19 Years.	3	1	Polly never was vaccinated. Mr. Doane and his son were vaccinated and escaped.
Mike Brendel .....	48 Years.	5	1	Mike never was vaccinated. The others were vaccinated and escaped.
Mary E. Jones .....	61 Years.	2	2	Mary never was vaccinated. Wells Jones claims he was vaccinated, but this is doubtful.
Malinda Divine .....	31 Years.	3	2	Malinda and her son were never vaccinated and they took smallpox. William Divine was vaccinated and escaped.
John Divine .....	2 Years.			
Bertha Habig .....	8 Years.	6	1	Bertha was never vaccinated. The others were vaccinated and escaped.
Raymond Egg .....	9 Years.	9	2	The boys were never vaccinated. The others escaped because they were vaccinated.
Charles Egg .....	9 Years.			
Victor Sprauer .....	6 Years.	9	1	Victor never was vaccinated. The others escaped because they were vaccinated.
Annie Geier .....	7 Years.	7	1	Annie never was vaccinated. The others escaped because they were vaccinated.
Hatter family .....	7 up to 46 Years.	9	4	Four took smallpox because they would not consent to be vaccinated in time, the others escaped because they were vaccinated.
Bettie Renner .....	24 Years.	4	1	Bettie never was vaccinated. The others escaped because they were vaccinated in time.

What could be more convincing than this record, that vaccination is a preventative of smallpox? Do not listen to the Ohio Waisenfreund, nor to the Jasper Herald, but get vaccinated. Do not rely on quack medicines, no matter by whom they are prescribed, but get vaccinated. If it don't take, get vaccinated again.

How much has it absolutely, so far, cost the taxpayers of the town of Jasper, because the above people would not listen to reason and science, but paid attention to the foolish vaporings of cranks and would-be smart people? Figure it out and then get vaccinated!

Truly yours,

DR. E. J. KEMPF,

November 6, 1903.

Secretary of Board of Health,

Jasper, Ind.



CHART SHOWING GEOGRAPHICAL DISTRIBUTION OF DEATHS FROM CERTAIN COMMUNICABLE DISEASES IN OCTOBER, 1903.

**NORTHERN SANITARY SECTION.**

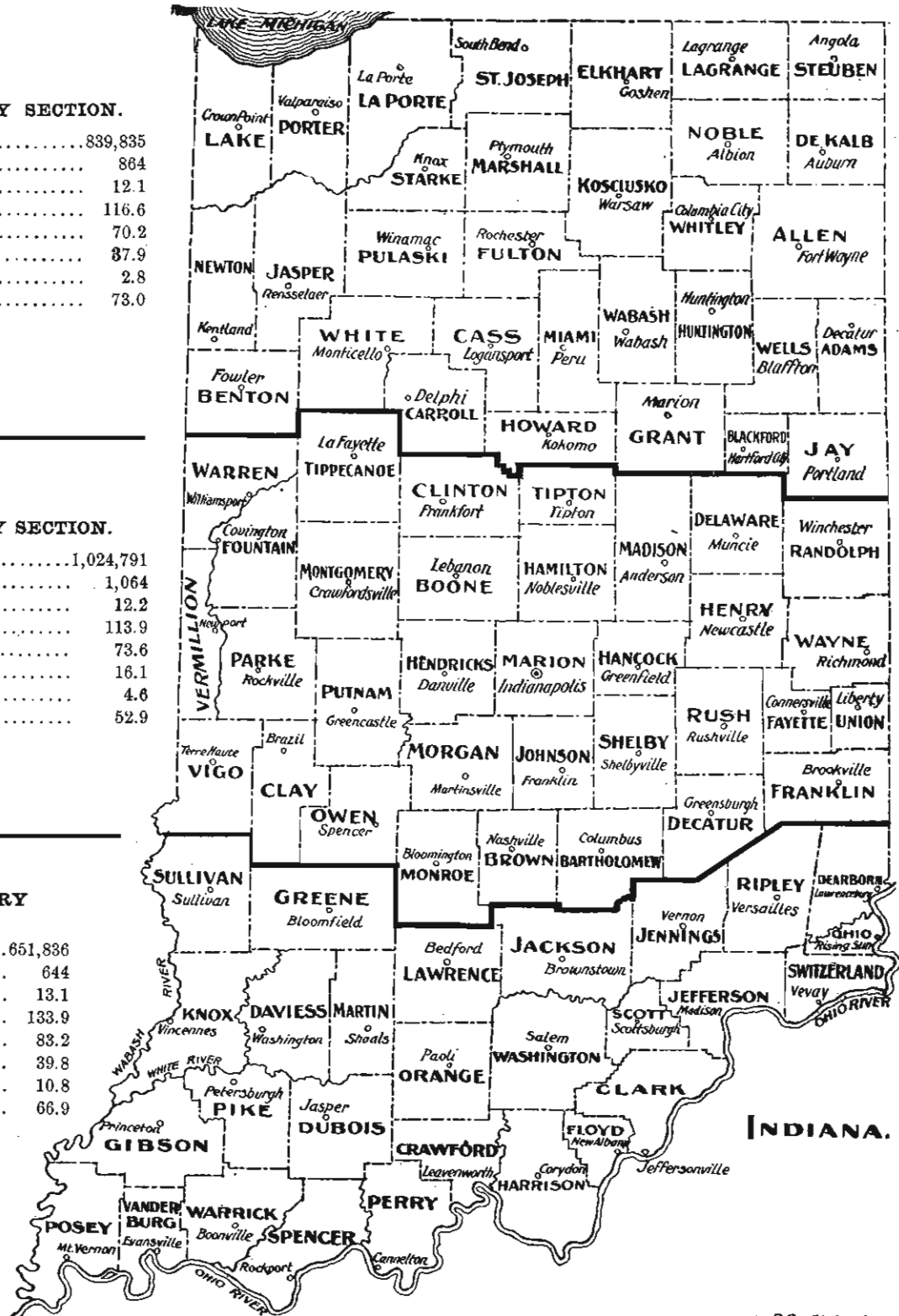
Total population	839,835
Total deaths	864
Death rate per 1,000	12.1
Consumption, rate per 100,000	116.6
Typhoid, rate per 100,000	70.2
Diphtheria, rate per 100,000	37.9
Scarlet fever, rate per 100,000	2.8
Diarrheal diseases, rate per 100,000	73.0

**CENTRAL SANITARY SECTION.**

Total population	1,024,791
Total deaths	1,064
Death rate per 1,000	12.2
Consumption, rate per 100,000	113.9
Typhoid, rate per 100,000	73.6
Diphtheria, rate per 100,000	16.1
Scarlet fever, rate per 100,000	4.6
Diarrheal diseases, rate per 100,000	52.9

**SOUTHERN SANITARY SECTION.**

Total population	651,836
Total deaths	644
Death rate per 1,000	13.1
Consumption, rate per 100,000	133.9
Typhoid, rate per 100,000	83.2
Diphtheria, rate per 100,000	39.8
Scarlet fever, rate per 100,000	10.8
Diarrheal diseases, rate per 100,000	66.9



Wm. B. Burford, m.d., pub.





Mortality of Indiana for October, 1903.

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Population, Census 1900.	Total Deaths Reported for October, 1903.	Annual Death Rate per 1,000 Population.	Stillbirths.	Important Ages.										Deaths and Annual Death Rates per 100,000 Population from Important Causes.							
					Under 1.		1 to 5.		5 to 10.		10 to 15.		65 and Over.		Consumption.		Other Forms Tuberculosis.		Typhoid Fever.		Diphtheria.	
					Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
<b>State</b> .....	<b>2,516,462</b>	<b>2,572</b>	<b>12.0</b>	<b>155</b>	<b>424</b>	<b>17.5</b>	<b>198</b>	<b>8.1</b>	<b>74</b>	<b>3.0</b>	<b>61</b>	<b>2.5</b>	<b>659</b>	<b>27.2</b>	<b>256</b>	<b>120.0</b>	<b>41</b>	<b>19.2</b>	<b>160</b>	<b>75.0</b>	<b>63</b>	<b>295.5</b>
Northern Co's....	839,835	864	12.1	52	144	17.7	67	8.2	27	3.3	18	2.2	246	30.2	83	118.6	13	18.2	50	70.2	27	37.9
Central Co's.....	1,024,791	1,084	12.2	61	178	17.7	63	6.2	25	2.4	21	2.0	282	28.1	99	113.9	23	25.4	64	73.6	14	16.1
Southern Co's....	651,836	644	13.1	42	102	16.9	68	11.1	22	3.6	22	3.6	131	21.7	74	133.9	5	9.0	46	83.2	22	39.8
<b>All cities</b> .....	<b>857,840</b>	<b>1,120</b>	<b>15.4</b>	<b>73</b>	<b>181</b>	<b>17.3</b>	<b>78</b>	<b>7.4</b>	<b>38</b>	<b>3.6</b>	<b>24</b>	<b>2.2</b>	<b>238</b>	<b>22.7</b>	<b>112</b>	<b>154.0</b>	<b>22</b>	<b>30.2</b>	<b>59</b>	<b>81.1</b>	<b>35</b>	<b>48.1</b>
Over 50,000.....	228,171	290	14.9	19	48	16.9	16	5.9	5	1.8	4	1.4	56	20.6	41	212.0	5	25.8	15	77.5	4	20.6
25,000 to 50,000.....	117,787	178	17.8	14	29	17.6	17	10.3	11	6.7	3	1.8	30	18.2	11	110.1	2	20.0	7	70.1	10	100.1
10,000 to 25,000.....	218,823	292	15.7	11	51	18.1	18	6.4	10	3.5	6	2.1	70	24.9	30	161.9	5	26.9	14	75.5	17	91.7
5,000 to 10,000.....	161,751	189	13.7	14	36	20.5	13	7.4	6	3.4	7	4.0	42	24.0	13	94.8	7	51.0	13	94.8	1	7.2
Under 5,000.....	131,508	171	15.3	15	19	12.1	14	9.0	6	3.8	4	2.5	40	25.6	17	152.5	3	26.9	10	89.7	3	26.9
Country.....	1,658,622	1,452	10.3	82	243	17.7	120	8.7	36	2.6	37	2.7	421	30.7	144	102.4	19	13.5	101	71.8	28	19.9

POPULATION BY GEOGRAPHICAL SECTIONS AND AS URBAN AND RURAL.	Deaths and Annual Death Rates per 100,000 Population from Important Causes.																							
	Croup.		Scarlet Fever.		Measles.		Whooping Cough.		Pneumonia.		Diarrhoeal Diseases, Under 5 Yrs		Cerebro-Spinal Meningitis.		Influenza.		Puerperal Septicæmia.		Cancer.		Violence.		Small-pox.	
	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.	Number.	Death Rate.
<b>State</b> .....	<b>6</b>	<b>2.8</b>	<b>12</b>	<b>5.6</b>	<b>5</b>	<b>2.3</b>	<b>8</b>	<b>3.7</b>	<b>132</b>	<b>61.8</b>	<b>135</b>	<b>63.3</b>	<b>25</b>	<b>11.7</b>	<b>8</b>	<b>3.7</b>	<b>10</b>	<b>4.6</b>	<b>105</b>	<b>49.2</b>	<b>146</b>	<b>68.4</b>	<b>1</b>	<b>.4</b>
Northern Co's....	3	4.2	2	2.8	2	2.8	1	1.4	44	61.8	52	73.0	13	18.2	.....	.....	1	1.4	34	47.7	46	64.6	.....	.....
Central Co's.....	2	2.3	4	4.6	2	2.3	5	5.7	65	74.8	46	52.9	9	10.3	7	8.0	3	3.4	41	47.2	68	78.2	.....	.....
Southern Co's....	1	1.8	6	10.8	1	1.8	2	3.6	23	41.6	37	66.9	3	5.4	1	1.8	6	10.8	30	54.3	32	57.9	1	1.8
<b>All cities</b> .....	<b>2</b>	<b>2.7</b>	<b>7</b>	<b>9.6</b>	.....	.....	<b>2</b>	<b>2.7</b>	<b>68</b>	<b>93.5</b>	<b>60</b>	<b>82.5</b>	<b>15</b>	<b>20.6</b>	<b>5</b>	<b>6.8</b>	<b>2</b>	<b>2.7</b>	<b>47</b>	<b>64.6</b>	<b>78</b>	<b>107.2</b>	.....	.....
Over 50,000.....	.....	.....	1	5.1	.....	.....	1	5.1	18	93.0	14	72.4	.....	.....	1	5.1	.....	.....	11	56.8	27	139.6	.....	.....
25,000 to 50,000.....	.....	.....	2	20.0	.....	.....	.....	.....	9	90.1	7	70.1	4	40.0	.....	.....	.....	.....	9	90.1	11	110.1	.....	.....
10,000 to 25,000.....	1	5.3	.....	.....	.....	.....	.....	.....	21	114.3	15	80.9	5	26.9	1	5.3	1	5.3	12	64.7	21	113.3	.....	.....
5,000 to 10,000.....	.....	.....	.....	.....	.....	.....	1	7.2	10	72.9	19	138.6	6	43.7	3	21.8	1	7.2	9	65.6	9	65.6	.....	.....
Under 5,000.....	1	8.9	4	35.8	.....	.....	.....	.....	10	89.7	5	44.5	.....	.....	.....	.....	.....	.....	6	53.8	10	89.7	.....	.....
Country.....	4	2.8	5	3.5	5	3.5	6	4.2	64	45.5	75	53.3	10	7.1	3	2.1	8	5.6	58	41.2	68	48.3	1	.7

Meteorological Summary for October, 1903. Furnished by the Central Office, Indiana Section, Climate and Crop Service, U. S. Weather Bureau, Indianapolis, Ind.

W. T. BLYTHE, SECTION DIRECTOR.

SECTIONS.	TEMPERATURE.										PRECIPITATION.				CONDITION OF SKY.			Wind.		
	Mean.	Departure from Normal.	Highest.					Lowest.					In Inches.				Number of Days.			
			Degree.	Date.	Place.	Degree.	Date.	Place.	Average.	Departure from Normal.	Snowfall Unmelted.	Days with .01 inch or more.	Clear.	Partly Cloudy.	Cloudy.					
																Prevaling Direction.				
Northern Section.....	53.5	+0.2	86	3	Delphi.....	20	24	Bluffton.....	2.42	-0.11	T	7	17	7	7	SW.				
Central Section.....	54.6	+0.6	86	3	Lafayette.....	20	27	Delphi.....	3.19	+1.11	T	6	16	6	9	SW.				
Southern Section.....	57.0	+0.4	86	3	Logansport.....	20	27	Northfield.....	2.42	+0.09	0	5	17	8	6	SW.				
State.....	55.0	+0.4	86	3	Winamac.....	20	28	Rome.....	2.68	+0.36	T	6	17	7	7	SW.				